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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/770,407	01/29/2001	Wilco Dijkstra	550-202	6180

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EXAMINER

MAI, TAN V

ART UNIT	PAPER NUMBER
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2124

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DATE MAILED: 08/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PPE

Office Action Summary

Application No.

09/770,407

Applicant(s)

Examiner

Mai, T.

Group Art Unit

2124

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for ReplyA SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☐ Responsive to communication(s) filed on 1-29-01
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-16 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-16 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 2
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

1. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per independent claim 1, the phrase "processing **an input data word**" (line 1) is misdescriptive because the claim recites "TWO input data values (2, 4)". The terms "**may** extend" (line 8), "**may** be generated" (line 12) and "**would** be" (line 17) are indefinite. Similarly noted claim 14 "**may** vary" and claim 15.

As per claim 11, the phrase "shifting said intermediate result data word" is misdescriptive. It should be "shifting the result of **claim 9**".

As per independent claim 15, the phrase "said step of performing" (line 13) lacks antecedent basis and is misdescriptive. It should be --said processing logic--.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al.

As per independent claim 1, Lee et al disclose, e.g., see Figs. 1 and 3, the invention substantially as claimed, including: an adder that can be divided into a plurality of sub-adders that operate on sub-words of the input integers in parallel. Fig. 3 shows a

detail of a sub-adder which has the ability to compute the averaging of two sub-words. The sub-adder comprises: (1) an adding section (102), (2) a blocking circuit (112) and (3) multiplexers (121-124) which are capable of performing the claimed steps “performing”, “calculating” and “combining”, respectively. It is noted that Lee et al do NOT disclose the claimed “corrupting result bit” [in performing step] and “error correcting data word” [in the calculating step] features; however, Lee et al do show the equivalent features, e.g., see col. 5, lines 10-36, especially “[t]he least significant bit of the sum is lost. The most significant bit of the average is the carry output of the single bit adder operating on the most significant bit of the partial operands” (lines 10-13). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to design the claimed invention according to Lee et al’s teachings because the reference discloses an adder that can be divided into a plurality of sub-adders that perform the averaging on sub-words of the input integers in parallel as claimed.

As per claim 2, Lee et al do show the claimed “addition operation”, e.g., see claim 12.

As per claim 3, Lee et al do show the claimed feature.

As per claim 4, Lee et al do show the claimed “subtraction operation”, e.g., see claim 12.

Due to the similarity of claim 5 to claim 3, it is rejected under a similar rationale.

As per claim 6, Lee et al do show the claimed feature, e.g., see col. 2, lines 44-55, and col. 5, lines 9-10.

As per claims 7-10, the claims recite EOR logic, AND logic, subtraction and addition functions to correct the results of sub-words. These features are obvious to a person having ordinary skill in the art. Lee et al 's adder use the carry outputs as the most significant bits of the results of sub-words.

As per claim 11, Lee et al do show the claimed feature, e.g., see col. 5, lines 7-10.

As per claims 12-13, Lee et al do show the claimed features, e.g., see col. 1, line 61 to col. 2, line 7, and col. 6, lines 38-56.

As per claim 14, Lee et al do show the claimed feature, e.g., see col. 5, lines 34-50.

Due to the similarity of apparatus 15 to method claim 1, it is rejected under a similar rationale.

As per claim 16, the claim adds a computer program for controlling an apparatus to perform data processing of method claim 1. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to write computer program for Lee et al 's adder that can be divided into a plurality of sub-adders that perform the averaging on sub-words of the input integers in parallel as claimed.

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cited references are art of interest. It is noted that Reference H, EPO 0 656 582 A1, is the same as applied reference.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan V. Mai whose telephone number is (703) 305-9761. The examiner can normally be reached on Tue-Fri from 6:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki, can be reached on (703) 305-9662. The fax phone numbers for the organization where this application or proceeding is assigned are:

After-final (703) 746-7238

Official (703) 746-7239

Non-Official/Draft (703) 746-7240.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.



TAN V. MAI
PRIMARY EXAMINER